VOLKOV, I.F. CAND PHYSICOMATH SCI

Dissertation: "Variation of the Solutions of Ordinary Linear Differential Equations of the Third Order."

11 May 49

Sci Res Inst of Mathematics, Moscow Order of Lenin State V imeni M.V. Lomonosov.

SO Vecheryaya Moskva
Sum 71

KULIKOV, V.O., inzh.; KHIL'KO, M.M., inzh.; PRILEPSKIY, V.M., inzh.; ZUBKOV, A.P., inzh.; prinimali uchstiye; MERSHCHIY, N.P., inzh.; CHETVERIKOV, V.Ya., inzh.; DUBROV, V.S., inzh.; VOLKOV, I.F., tekhnik; YERSHOV, V.I., tekhnik; SAFONOVA, M.F., tekhnik

Using scale in steelmaking by the scrap and ore process. Stal' 20 no.8:708-710 Ag '60. (MIRA 13:7)

(Open-hearth process)

VOLKOV, ~~L.F.,~~ kandidat meditsinskikh nauk; YEGOROVA, A.P., kandidat meditsinskikh nauk

Dynamics of the blood complement titer in radiation sickness combined with other lessions. Voen.-med. zhur. no.4:27-30 Ap '56.
(RADIATION SICKNESS) (COMPLEMENTS (IMMUNITY))

22034

S/177/61/000/001/010/010
D211/D306

27.6330

AUTHOR: Volkov, I.F., Lieutenant Colonel of Medical Services

TITLE: A device for studying the fatigue of flying personnel

PERIODICAL: Voyenno-meditsinskiy zhurnal, no. 1, 1961, 78

TEXT: The apparatus consists of a box with a metal lid; in the box is a small electric battery and an electric lamp. One end of the battery is connected to a metallic rod (5 mm long and 1.5 mm thick); the other to the box's metal lid. One part of the lid is perforated with holes of diameters ranging from 2 to 8 mm; on both sides of the lid there are panels with non-consecutive numbers from 1 -25. By touching them with the rod, the subject examined lights the lamp, the time needed for finding consecutive numbers being recorded by the examiner with a stop watch. The second part of the exercise consists of inserting the rod into the holes on the lid, and holding it there for 1 sec. The degree of fatigue as expressed by the tremor of fingers is determined by the diameter of the hole in

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X

A device for studying ...

which the rod begins to touch its sides, lighting the lamp. During the test the subject's arm is outstretched and slightly bent at the elbow. The author examined 780 airmen and 275 soldier for attentiveness and 400 airmen and 270 soldiers for fatigue. He found that, in general, the airmen completed the first exercise in a shorter time than the soldiers, mostly in less than 40 seconds. Such a time is regarded as good; a time up to 50 sec is considered unsatisfactory; men who needed a longer period of time were found to be either ill or particularly tired. Fatigue is registered during the second exercise when the tremor of fingers is so pronounced that it causes closing of the circuit in holes of 4.5 mm or larger diameters. There is 1 figure.

SUBMITTED: July, 1960

Card 2/2

VOLKOV, I.G.

AUTHORS: Volkov, I.G., and Chelombit'ko, P.K., Engineers 118-58-4-11/23

TITLE: New Transloading Equipment at Sea Ports (Novaya tekhnika peregruzochnykh rabot v morskikh portakh)

PERIODICAL: Mekhanizatsiya Trudoyëmkikh i Tyazhëlykh Rabot, 1958, Nr 4, pp 28-30 (USSR)

ABSTRACT: Loading and unloading operations at sea ports are not yet, or only partly, mechanized. This refers mostly to the handling of loose freight and goods in packets inside ship holds and railroad cars. The tsentral'nyye proyektno-konstruktorskiye byuro (The Central Design-Construction Departments) of the Ministerstvomorskogo flota (Merchant Marine Ministry) are developing new machines and mechanisms for the complex mechanization of loading operations at sea ports. The authors give a detailed description of the following loading mechanisms: 1) the PTS-1 coal loader, designed by Engineer N.T. Sergel', with a capacity of 350 tons per hour; 2) the PTS-2 for the loading of ships with a capacity of 100 tons per hour; 3) the PTS-4, designed by the TsPKB-4, for the loading of 50% manganese ore; 4) the PTB-2, designed by the TsPKB-3,

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New Transloading Equipment at Sea Ports

118-58-4-11/23

for the loading of iron ore, bauxites, etc. into ship holds, with a capacity of 150 tons per hour; 5) the TsPKB-3 designed a scraper grab crane with a lifting capacity of 10 tons; 6) the PSG-200, designed by the TsPKB-3, with a capacity of 200 tons per hour (the loader has been designed particularly for the loading of manganese ore); 7) the bulldozer BMT-1, designed by the TsPKB-4, for the scraping of loose freight in ship holds, has a capacity of about 30 tons per hour; 8) the TsPKB-3 has designed (Initiator Engineer D.B. Spektor) a fork lift with a lifting height of 4.5 meters, to be used in ship holds; 9) for use inside railroad cars, the TsPKB has designed a fork lift with a lifting height of 1.5 meters and a load capacity of 1.5 tons. There are 6 figures.

AVAILABLE: Library of Congress

Card: 2/2 1. Cargo-Handling-Equipment

VOLKOV, I.G., starshiy prepodavatel'

Automatic portable gas analyzer for use on the "Donbass" cutter-loader. Izv. vys. ucheb. zav.; gor. zhur. 5 no.3:151-153 '62. (MIRA 15:7)

1. Khar'kovskiy gornyy institut. Rekomendovana kafedroy gornoy elektrotekhniki Khar'kovskogo gornogo instituta.
(Coal mining machinery--Electric equipment)
(Mine gases)

Volkov, I. G.

USSR/ Engineering - Chain drives

Card 1/1 Pub. 128 - 5/34

Authors : Kasyanevich, A. M., and Volkov, I. G.

Title : Concerning the quality of noiseless chain-drives

Periodical : Vest. mash. 12, 16-18, Dec 1954

Abstract : The design of a new type of a noiseless gear chain-drive with a link feed of 19.05 mm, and a width of 94 mm is discussed. Operational test results of the above mentioned chain drive and its comparison with drives produced by the Chain Factory are given. Illustrations; table.

Institution : ......

Submitted : ......

VOLKOV, Ivan Georgiyovich; GLIKIN, Boris Abramovich; ZABOLOTNYY, Il'ya Yevtikhiyevich; LIKHOTINSKIY, Valentin Sergeyevich; SPEKTOR, David Borisovich; YAVORSKIY, Anatoliy Georgiyevich; SUKHIN, Ye.T., red.; MARTIROSOV, A.Ye., red.; VAYL', T.I., red.izd-va; LAVRENOVA, N.B., tekhn.red.

[Reference book for sea harbor mechanizers] Spravochnik mekhanizatora morskogo porta. Moskva, Izd-vo "Morskoi transport," 1959. 462 p. (MIRA 13:2)
(Harbors--Equipment and supplies)
(Cargo handling--Equipment and supplies)

Volkov, I.I.

KUZYAK, V.A.; VOLKOV, I.I., retsenzent; PLEMYANNIKOV, M.N., redaktor;
NEKRASOVA~~, O.I.,~~ tekhnicheskiy redaktor

[Kilns for annealing glass] Pechi dlia otzhiga stekla. Moskva, Gos. nauchno-tekhn. izd-vo legkoi promyshlennosti, 1952. 152 p. [Microfilm] (MLRA 7:10)

(Kilns) (Glass manufacture)

S/081/62/000/004/019/087
B149/B101

AUTHORS: Ostroumov, E. A., Volkov, I. I.

TITLE: Separation of iron, aluminum, and chromium from manganese, nickel, cobalt, and zinc with cinnamic acid

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 133, abstract 4D52 (Tr. In-ta okeanol. AN SSSR, v. 47, 1961, 150 - 158)

TEXT: The method of separating Fe, Al, and Cr from Mn, Ni, Co and Zn is based on the precipitation of Fe^{3+}, Al^{3+} and Cr^{3+} with cinnamic acid with which they form insoluble salts while Mn^{2+}, Ni^{2+}, Co^{2+}, and Zn^{2+} form soluble complex compounds. The most complete precipitation of Fe, Al, and Cr occurs at pH 5.0 - 5.1. Coprecipitation of divalent elements is prevented by the addition of ammonium chloride. To $\leq$60 ml of the solution to be analyzed containing about 0.1 g of the sesquioxides, 10 - 15 g of NH_4Cl are added, then a concentrated solution of NH_4OH is added until the appearance of turbidity, which is cleared with 2 - 3 drops of HCl. The solution

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Separation of iron, aluminum, and...

is diluted with water to 80 - 90 ml, and heated to boiling. 20 ml of 5% ammonium cinnamate (I) are added; the beaker is covered, the liquid is gently boiled for 1 - 2 min and left on a boiling water bath for 1 - 1.5 hours, with occasional stirring. The precipitate is filtered, rinsed twice with 20 - 25 ml portions of the following solution: 10 g NH_4Cl dissolved in hot water, mixed with 20 ml of 5% solution of I and diluted with water to 100 ml, and finally with hot 4% solution of I; it is then dried and calcined. This method is suitable for the analysis of marine ferromanganese concretions. [Abstracter's note: Complete translation.]

Card 2/2

VOLKOV, I.I.

Some aspects in the development of climatology. Meteor.i gidrol.
no.5:20-21 My '53. (MIRA 8:9)

1. Upravleniye vodnykh putey "Glavvostok", Novosibirsk.
(Climatology)

VOLKOV, I.I.; OSTROUMOV, E.A.

Forms of sulfur compounds in silt waters of sediments of the Black Sea.
Geokhimiia no.4:337-345 '57. (MIRA 12:3)

1. Laboratory of Marine Sediments of the Institute of Oceanology,
Academy of Sciences, U.S.S.R., Moscow.
(Thiosulfates) (Black Sea--Silt)

VOLKOV, I.I.

OSTROUMOV, E.A.; VOLKOV, I.I.

[redacted]

Interconnection of phosphorus, vanadium and organic matter in the Black Sea sediments [with summary in English]. Geokhimiia AN SSSR no.6:518-528 '57. (MIRA 11:2)

1. Institut okeanologii AN SSSR, Moskva.
(Phosphorus) (Vanadium)
(Black Sea--Sedimentation and deposition)

20-114-4-47/63

AUTHORS: Volkov, I. I., Ostroumov, E. A.

TITLE: Determination of Thiosulphates in Silt Waters of the Black
Sea Deposits (Opredeleniye tiosul'fatov v ilovykh vodakh os-
adkov Chernogo morya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 853-855
(USSR)

ABSTRACT:
In order to get a better idea of the diagenesis processes it
is necessary when studying the types of sulphur compounds in
sea deposits, not only to investigate the solid phase, but to
determine also the types of sulfur compounds of the water by
which these deposits are drenched. In the Black Sea, in which
an intensive reduction process of the sulphates takes place,
there may also occur sulphites and thiosulphates, beside free
hydrogen sulfide and sulphates. The authors investigated, from
the expedition ship "Akademik S.Vavilov", at the below mention-
ed station, whether these soluble compounds occur in the silt
waters of the deposits. A method for the determination of sul-
fites and thiosulfates in the presence of free hydrogen sulfide
[illegible] had been previously worked out by Kurtenacker. Its applica-
bility to the Black Sea was to be checked. The shallow-water
deposits here often do not contain any hydrogen sulfide. In

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Determination of Thiosulphates in Silt Waters of the Black Sea Deposits 20-114-4-47/63

the silt water of the deep-sea deposits it is often removed during filtration in vacuum. Tests indicated that the content values of the thiosulfates obtained on this occasion are unstable and vary considerably. This is due to the leaking through into the filtration of small amounts of colloidal sulphurous iron (hydrotoilite), For that reason treatment with zincarbonate suspehsion is undispensable. It removes the free hydrogen sulfide and the colloidal iron which is disturbing in the determination of the thiosulfates. The experiments showed that the silt waters in the Black Sea deposits contain virtually no sulfites, at the most very minute traces of them, whose amount lies within the limits of experimental errors. But steady figures for the thiosulfates are obtained in spite of their small amounts. They vary between from 0,0 to 10 mg/lit. The deep-sea deposits are richer in them than those of the shallow water. As is well-known one sulfur atom of the thiosulfates is very mobile and capable of reaction. Therefore the thiosulfates can function as a peculiar type of sulfur transmitters. In this respect the occurrence of thiosulfates may be of great interest in the study of diagenetical transformation of the Black Sea deposits. There are 1 table and

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Determination of Thiosulphates in Silt Waters of the Black Sea Deposits 20-114-4-~~48~~47/63

5 references, 4 of which are **Soviet.**

ASSOCIATION: Black Sea NI Experimental Scientific-Research Station of the Institute of **Oceanography** of the AS USSR (Chermomorskaya eksperimental'naya nauchno-issledovatel'skaya stantsiya Instituta okeanologii Akademii nauk SSSR)

PRESENTED: December 18, 1956 by N. M. Strakhov, Member, Academy of Sciences, USSR

SUBMITTED: December 12, 1956

Card 3/3

VOLKOV, I. I.

20-4-32/51

AUTHORS: Volkov, I. I., and Ostroumov, E. A.,

TITLE: Concretions of Iron Sulphide in Black Sea Deposits (Konkretsii sul'fida zheleza v otlozheniyakh Chernogo morya)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 4, pp. 645-648 (USSR)

ABSTRACT: Already in 189o colloidal iron sulphide was found in the Black Sea deposits and the possibility of a formation of pyrites which was contained in it in form of tiny pellets was assumed. Also at that time concretions of pyrites of a length of 12 mm and a breadth of o,5 mm were found there for the first time. Beside 9o,84% pyrites they consist of a small qhantity of silicates which apparently are of the deposit itself. A further reference review shows the presence of mel'nicovit, hydrotroilite, and marcasite also in the old Black Sea deposits. Transitions between the two latter minerals occur, too. The research of these transitions and of the process could throw a light on one of the questions of the autogenous mineral formation of the bottom of the sea. In summer 1956 a pillar of the ground of a length of 6m was taken in a depth of 54o m by the expedition ship "Akademik S. Vavilov" from one of the stations beside the cape Kodor (42°54',0 north latitude, 4o°54',8 east longitude). It was clayey mud, grey coloring with bluish tinge and with single intermedia-

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Concretions of Iron Sulphide in Black Sea Deposits. 20-4-32/51

te layers and stains colored black by hydrotroilite. The analysis carried out showed that the concretions consist on the whole of iron sulphide. The latter contains considerable quantities of iron sulphide which can be decomposed by hydrochloric acid (apparently mel'nicovit) and small quantities of pyrites(marcasite). Apparently the accumulations of colloidal hydrotroilite form change into smearing semi-solid lumps. In the case of a further dehydration and consolidation begins, as it can be assumed, the addition of the second sulphur atom under formation of the metastable form of iron sulphide-mel'nicovit which in the further course changes into marcasite and pyrites. Thus it can be assumed with a certain degree of conviction that the found concretions are a transition form in the transformation of hydrotroilite into pyrites(marcasite). There are 1 figure, and 14 references, 12 of which are Slavic.

ASSOCIATION: Institute for Oceanology AN USSR (Institut okeanologii Akademii Nauk SSSR)
PRESENTED: May 6, 1957, by N. M. Strakhov, academician
SUBMITTED: May 3, 1957
AVAILABLE: Library of Congress
Card 2/2

PHASE I BOOK EXPLOITATION 846

U.S.S.R. Ministerstvo geologii i okhrany nedr

Metody opredleniya radioaktivnykh elementov v mineral'nom syr'ye (Methods of Determining Radioactive Elements in Mineral Raw Materials) Moscow, Gosgeoltekhizdat, 1958. 68 p. 3,000 copies printed.

Compilers: Sochevanov, V.G. and Titov, V.I.; Ed.: Krasnova, N.E. Tech. Ed.: Averkiyeva, T.A.

PURPOSE: This book is for those engaged in geochemical prospecting for radioactive ores.

COVERAGE: The chemical determination of radioactive substances in minerals and rock formations is described in this publication. Chemical treatment of materials in preparation for radiometric analysis is also included. The proposed methods are considered to be the most

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Methods of Determining Radioactive Elements (Cont.) 846

reliable for geochemical research. Methods are presented in the form of separate procedure instructions with the inclusion of: principle of the method, elimination of interfering factors, application limits, necessary reagents, procedure of analysis. Specifications for high purity reagents are given whenever necessary. There is a bibliography with 26 references, 17 of which are Soviet, 4 English, 3 German, 1 Czech, and 1 Swiss.

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Methods of Determining Radioactive Elements (Cont.) 846

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AVAILABLE: Library of Congress

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TM/nah
12-10-58

5(2)

AUTHORS: Volkov, I. I., Ostroumov, E. A. SOV/75-13-6-14/21

TITLE: Determination of Sulfates by Their Reduction to Hydrogen Sulfide (Opredeleniye sul'fatov vosstanovleniyem ikh do serovodoroda)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol 13, Nr 6, pp 686-690 (USSR)

ABSTRACT: Among the titrimetric methods for determining sulfates, those basing on a reduction of sulfate to hydrogen sulfide and a subsequent iodometric titration, are of particular interest (Refs 1-11). In using stannous chloride and phosphoric acid for the sulfate reduction (Refs 7, 8), a disturbance is caused by copper and other elements of the same analytical group, which form sulfides difficult to solve. The authors of the present paper worked out a method for determining sulfates. The reduction to hydrogen sulfide takes place with a reagent obtained from $SnCl_2$ and phosphoric acid. Owing to the fact that the apparatus for the reduction described by Kiba and collaborators (Ref 8) has a number of defects, it was modified by the authors. The new apparatus is illustrated and described. It is characterized by the fact that it can be quickly

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Determination of Sulfates by Their Reduction to Hydrogen Sulfide SOV/75-13-6-14/2

reactivated and that it is well protected from corrosion by the concentrated phosphoric acid. The reagent for the reduction was prepared in accordance with Kiba's directions by heating $SnCl_2$ with concentrated phosphoric acid until hydrogen chloride was completely removed. In this connection it was found, however, that a reagent having a constant activity was not obtainable. Investigations carried out gave evidence of the fact that small amounts of chlorides remaining in the reagent after boiling not only do not disturb the reduction process but even intensify the latter. A prolonged heating of the reagent for the purpose of removing hydrogen chloride effects a considerable decrease of the reducibility, this being apparently caused by the formation of considerable amounts of pyrophosphoric acid. A very accurate description is given of the preparation of the $SnCl_2 \cdot 2\ H_2O$ used for the reagent, as well as of the concentrated phosphoric acid, and also of the optimum conditions for the preparation of the reagent. Temperature is not increased beyond 300°. The dense liquid obtained is dried on KOH or $CaCl_2$ and stored. This method was tested on the analysis of pure salts. As became apparent, the presence of

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Determination of Sulfates by Their Reduction to Hydrogen Sulfide SOV/75-13-6-14/21

Ca, Ba, Fe, Al, Cr, Mn, Co, Ni and Zn does not cause any disturbance. The reduction process is accelerated up to 0.2 g by the presence of alcali metals. Neither do Bi, Pb and Cd disturb the reduction. Copper and mercury salts cause a disturbance. The same method was also adopted to analyze natural materials, as gypsum, Black Sea ooze and sea water. The results are on the same level with those obtained by the gravimetric determination of sulfate as $BaSO_4$. A number of practical indications for this method is also given. There are 2 figures, 3 tables, and 11 references.

ASSOCIATION: Institut okeanologii AN SSSR, Moskva (Institute of Oceanography of the Academy of Sciences, USSR, Moscow)

SUBMITTED: October 1, 1957

Card 3/3

VOLKOV, I.I.

Determination of different sulfur compounds in marine sediments.
Trudy Inst.Okean. 33:194-208 '59. (MIRA 13:4)
(Deep-sea sediments) (Sulfur compounds)

3 (8), 5 (2)

AUTHOR: Volkov, I. I. SOV/20-126-1-45/62

TITLE: On Free Hydrogen Sulphide and Ferric Sulphide in the Silt Deposits of the Black Sea (O svobodnom serovodorode i sernistom zheleze v ilovykh otlozheniyakh Chernogo morya)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 1, pp 163-166 (USSR)

ABSTRACT: The silt deposits of the deep sea contain several sulphur compounds beside free H_2S and ferric sulphide (like hydrotroilite) in the Black Sea. They are related to the solid phase of the sediment, form, however, a part of the liquid phase as well - of the silt water which saturates the deposits (Refs 1, 2). Other sulphur compounds are determined according to an already worked out method (Refs 3, 4). The determination of the free H_2S in the silt in the presence of other sulphur compounds is carried out in a special apparatus in the CO_2 current and on heating in a water bath by careful distillation (Ref 5). The author took clayey-carbonate silt from a depth of 1820 m which had a H_2S smell. Hydrogen could

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not be used as protective gas (in line with Ref 6). The author carried out experiments with CO_2 and N_2. The distillation was carried out at room temperature. Natural silt as well as silt which was diluted with water were used. The experiments were carried out in an apparatus for the determination of the sulphide sulphur (Ref 3). The humidity of the silt was determined in order to be able to determine the H_2S content in the ratio to the silt water. Table 1 shows the results obtained. The H_2S content is given, recalculated to sulphur. These data show that quite different values of the content of free H_2S in the sediment can be obtained according to the instructions of determination. Values obtained in the case of a distillation at low temperature in the N_2-current with water addition correspond to the true content. All other determinations give obviously too high results. A similar distillation furthermore partly replaces the sulphides. Thus additional H_2S quantities are added. The same holds in the

On Free Hydrogen Sulphide and Ferric Sulphide in the Silt Deposits of the Black Sea SOV/20-126-1-45/62

case of the CO_2-atmosphere. On the strength of his experiments the author recommends the optimum determination conditions of free H_2S. Such determinations were carried out in the case of 3 samples of Black Sea silt according to this method (Table 2). Further experiments showed that exactly half of the sulphide sulphur is distilled off from the sediment in the CO_2-current in the presence of water. I.e. the half of the sulphur that corresponds to the colloidal iron sulfide - to hydrotroilite. The author says in contrast to other research workers (Refs 7-11) that the hydrotroilite of the Black Sea sediments corresponds to the empirical formula $FeS \cdot H_2S$. It is possible that this formula holds only in the case of the upper strata of the H_2S zone. The H_2S quantity in the sediment is reduced with increasing depth. Other forms of hydrotroilite may as well occur there. The author found also iron as FeS in these sediments (Ref 13). There are 1 figure, 2 tables, and 12 references, 10 of which are Soviet.

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On Free Hydrogen Sulphide and Ferric Sulphide in the Silt Deposits of the Black Sea SOV/20-126-1-45/62

ASSOCIATION: Institut okeanologii Akademii nauk SSSR (Institute of Oceanography of the Academy of Sciences, USSR)

PRESENTED: January 14, 1959, by N. M. Strakhov, Academician

SUBMITTED: January 7, 1959

Card 4/4

VOLKOV, I. I. Cand Chem Sci -- "On hydrogen sulfide and certain products of its transformations in ~~sediments of the~~ Black Sea deposits." Mos, 1960 (Acad Sci USSR. Inst of Geochemistry and Analytic Chemistry im V. I. Vernadskiy) (KL, 1-61, 182)

OSTROUMOV, E.A.; VOLKOV, I.I.

Forms of sulfur compounds occurring in bottom deposits of the Pacific Ocean near New Zealand. Trudy Inst. okean. 42:117-124 '60. (MIRA 13:10)
(Pacific Ocean--Sediments (Geology))
(Sulfur compounds)

VOLKOV, I.I.

Distribution of free hydrogen sulfide in sediments of the Black Sea.
Dokl. AN SSSR 134 no.3:676-679 S '60. (MIRA 13:9)

1. Institut okeanologii Akademii nauk SSSR. Predstavleno akad.
N.M. Strakhovym.
(Black Sea--Hydrogen sulfide)

S/169/62/000/010/055/071
D228/D307

AUTHOR: Volkov, I.I.

TITLE: Regularities of sulphur-compound formation and transformation in Black Sea sediments

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1962, 7-8, abstract 10V62 (In collection: Sovrem. osadki morey i okeanov, M., AN SSSR, 1961, 577-596)

TEXT: The following considerations are expressed on the basis of analysis of research results, obtained by a number of experts and, in particular, by the author. Free S is formed in the top horizons of the bottom ground of the Black Sea as a result of microbiologic and chemical processes. Some free S is supplied to the ground from the water itself, where it is formed mainly at the expense of the chemical oxidation of H_2S. The total amount of free S (the productivity of free S) depends directly on the free H_2S ground content. Colloidal Fe monosulfide (hydrotroilite) is formed as a result of the reaction of the H_2S, generated by the reduc-

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Regularities of sulphur-compound ... S/169/62/000/010/055/071
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tion of sulfates, with mobile forms of the lower oxide of Fe in the top ground horizons (perhaps partly, too, in benthonic water). The formation of Fe trisulfide is not detected under these environmental conditions, since the reduction of mobile Fe oxide forms to the lower oxide obviously takes place before Fe_2S_3 can be formed. Processes whereby hydrotroilite is converted into crystalline disulfide (marcassite and pyrite) may already be taking place (and sometimes extremely actively) in the top horizons of Black Sea sediments. In this process hydrotroilite and free S react with the assistance of thiosulfates, which hasten the transition of monosulfide to pyrite. The speed and the completeness of the conversion of hydrotroilite into pyrite or marcassite depend on the amount of free S in the ground and are determined chiefly by the ratio between the free S and sulfidic S concentration in the ground. If the ratio of free S to sulfidic S is > 2 (sometimes less) the process of hydrotroilite pyritization proceeds rapidly and is already almost fully completed in the topmost ground horizons. When the ratio of free S to sulfidic S is < 1, hydrotroilite changes very slowly into pyrite, the degree of pyritization is very small, and in this case hydrotroilite

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will be the prevalent Fe sulfide form in the ground. At the same time, since the amount of free S in the ground depends on the free H_2S content, it can be inferred that H_2S is not just the source of all the reduced forms of S compounds, but is also in its own way the regulator of all subsequent processes of sulfur-compound diagenesis in the ground of the sea. 17 references.
/ Abstracter's note: Complete translation /

S/169/62/000/005/059/093
D228/D307

AUTHORS: Ostroumov, E. A. and Volkov, I. I.

TITLE: Separation of iron, aluminum and chromium from manganese, nickel, cobalt and zinc by means of cinnamic acid

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 7, abstract 5V50 (Tr. In-ta okeanol. AN SSSR, 47, 1961, 150-158)

TEXT: A new method has been developed for the separation of iron, aluminum, and chromium from manganese, nickel, cobalt and zinc by means of cinnamic acid. On heating ammonium cinnamate iron, aluminum and chromium precipitate quantitatively from a weakly acid solution, while manganese, nickel, cobalt and zinc remain in solution. The composition of compounds, formed by cinnamic acid with trivalent iron, aluminum, and trivalent chromium under precipitation conditions, has been determined. Iron is deposited as a mixture of two basic salts, and the precipitate has a variable composition. Aluminum and chromium precipitate as basic salts of constant com-

Card 1/2

Separation of iron ...

S/169/62/000/005/059/093
D228/D307

position. The basic cinnamate salts of iron, aluminum, and chromium precipitate in a dense form and are readily filtered and washed. The sorption of divalent metals (Mn, Ni, Co and Zn) remaining in solution by the basic-salt residue is so negligible that the separation is achieved in a single stage. The presence of sulfates and nitrates causes no interference. The method is applicable for the analysis of a number of technical and natural objects, containing the indicated metals, especially in the analysis of marine iron-manganese concretions. 9 references. /Abstracter's note: Complete translation./

Card 2/2

VOLKOV, I.I.

Free hydrogen sulfide and some of its conversion products in sediments of the Black Sea. Trudy Inst. okean. 50:29-67 '61. (MIRA 15:1)

(Black Sea--Hydrogen sulfide)

VOLKOV, I.I.

Iron sulfides, their interrelationships and transformations in sediments of the Black Sea. Trudy Inst. okean. 50:68-92 '61. (MIRA 15:1)

(Black Sea--Iron sulfides)

OSTROUMOV, E.A.; VOLKOV, I.I.; FOMINA, L.S.

Distribution of different forms of sulfur compounds in bottom sediments of the Black Sea. Trudy Inst. okean. 50:93-129 '61. (MIRA 15:1)

(Black Sea--Sulfur compounds)

OSTROUMOV, E.A.; VOLKOV, I.I.

Use of cinnamic acid in analytical chemistry. Report No.2: Separation of titanium, zirconium, and thorium from manganese, nickel, cobalt, and zinc. Zhur.anal.khim. 17 no.4:461-465 Jl '62.
(MIRA 15:8)

1. Institute of Oceanology, Academy of Sciences, U.S.S.R., Moscow.
(Metals—Analysis) (Cinnamic acid)

VOLKOV, I.I.

State of hydrogen sulfide in the water and sediments of the Black Sea. Trudy Inst. okean. 54:39-46 '62. (MIRA 16:6)
(Black Sea--Hydrogen sulfide)

OSTROUMOV, E.A.; VOLKOV, I.I.

Separation of titanium, zirconium, and thorium from manganese, nickel, cobalt, and zinc by using cinnamic acid. Trudy Inst. okean. 54:170-181 '62. (MIRA 16:6)

(Metals--Analysis) (Cinnamic acid)

VOLKOV, I.I.

Distribution of hydrogen sulfide along the vertical of sediments in the Black Sea. Lit. i pol. iskop. no.1:125-130 '63.
(MIRA 17:3)

1. Institut okeanologii AN SSSR.

OSTROUMOV, E.A.; VOLKOV, I.I.

Sulfates in marine ooze. Lit. i pol. iskop. no.3:91-102 '63.
(MIRA 17:1)

1. Institut okeanologii AN SSSR.

S/075/63/018/001/004/010
E071/E452

AUTHORS: Ostroumov, E.A., Volkov, I.I.

TITLE: The use of cinnamic acid in analytical chemistry Communication 3. The separation of indium and gallium from manganese, nickel, cobalt and zinc

PERIODICAL: Zhurnal analiticheskoy khimii, v.18, no.1, 1963, 52-57

TEXT: A new method for quantitative precipitation of indium and gallium by cinnamic acid which permits their separation from manganese, nickel, cobalt and zinc was developed. Ammonium cinnamate quantitatively precipitates indium and gallium from weak acid solutions on heating, while manganese, nickel, cobalt and zinc remain in the solution. The precipitate formed, consisting of a mixture of two basic salts of gallium and indium, is easily filtered and washed. Sorption of manganese, nickel, cobalt and zinc (remaining in the solution) by the precipitate of basic salts is small, so that the separation can be done by a single precipitation. Sulphates and nitrates do not interfere. The experimental procedure is described in detail. There are 2 figures and 4 tables.

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Card 1/2

The use of cinnamic acid ...

S/075/63/018/001/004/010
E071/E452

ASSOCIATION: Institut okeanologii AN SSSR, Moskva
(Institute of Oceanology AS USSR, Moscow)

SUBMITTED: May 16, 1962

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Card 2/2

OSTROUMOV, E.A.; VOLKOV, I.I.

Cinnamic acid in analytical chemistry. Report No.4: Determination of beryllium and its separation from manganese, nickel, cobalt, and zinc. Zhur. anal.khim. 18 no.12:1452-1456 D '63. (MIRA 17:4)

1. Institut okeanologii AN SSSR, Moskva.

L 09103-67 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) JD/JG/GW

ACC NR: AP7002373 SOURCE CODE: UR/0020/66/167/005/1143/1146

AUTHOR: Pilipchuk, M. F.; Volkov, I. I.

ORG: Black Sea Experimental Scientific Research Station, Institute of Oceanology, AN SSSR (Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya stantsiya Instituta okeanologii AN SSSR)

TITLE: Distribution of molybdenum in recent black sea sediments

22

SOURCE: AN SSSR. Doklady, v. 167, no. 5, 1966, 1143-1146

TOPIC TAGS: oceanography, molybdenum compound

ABSTRACT: Very little data are available on the content of molybdenum in sea sediments. This paper gives data on the distribution of molybdenum in the recent sediments of the Black Sea. Samples were collected on a voyage of the "Akademik Vavilov"; 200 samples were collected at 192 stations, relatively uniformly covering the area of the Black Sea. The Mo content in this sea varies greatly: from 2 to $78 \cdot 10^{-4}$% MoO_3. Comparison of this figure with data for the Sea of Okhotsk shows that the quantity of Mo in the Black Sea is approximately an order of magnitude greater. The content varies from one type of bottom material to another. Two maps accompanying the text show the distribution of molybdenum in the different types of Black Sea sediments (in %); these patterns are interpreted in relation to bottom composition and entry of water into the sea from the rivers. Relationship to sea currents also is considered. This paper was presented by Academician N. M. Strakhov on 24 December 1965. Orig. art. has: 2 figures and 1 table. [JPRS: 37,710]

SUB CODE: 08 / SUBM DATE: 20Dec65 / ORIG REF: 007 / OTH REF: 001

Card 1/1 nst UDC: 551.464.38

0935 0671

L 24010-66 EWT(1) GW

ACC NR: AP6010430 (N) SOURCE CODE: UR/0020/66/167/002/0430/0433

AUTHOR: Pilipchuk, M. F.; Volkov, I. I.

25

B

ORG: Black Sea Scientific Research Experimental Station, Institute of Oceanology, Academy of Sciences, SSSR (Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya stantsiya Instituta okeanologii Akademii nauk SSSR)

TITLE: Tungsten in recent sediments of the Black Sea

12

SOURCE: AN SSSR. Doklady, v. 167, no. 2, 1966, 430-433

TOPIC TAGS: tungsten, sea water, ocean dynamics, ocean property

ABSTRACT: The object of the study was to determine the pattern of distribution of tungsten in recent sediments of the Black Sea. To this end, 192 samples of bottom sediments obtained at 192 stations were analyzed. The stations were uniformly distributed over the water area of the Black Sea and encompassed various types of samples. The data showed the tungsten content in the surface layer of the sediments to range rather widely: from $1.2 \cdot 10^{-3}$ to $16.1 \cdot 10^{-3}$% based on WO_3. In natural material, the highest tungsten content is found in aleurites. In carbonate-free matter, calcareous argillaceous sediments, which are free from the diluting effect of carbonates, showed the highest tungsten content. High tungsten concentrations are observed in both the sandy material of coastal areas and finely dispersed argillaceous material of the cen-

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Card 1/2 UDC: 551.464.38

L 24010-66

ACC NR: AP6010430

O

tral regions of the basin. Maps of tungsten distribution were compiled. It is concluded that in the course of sedimentation, the behavior of tungsten in the Black Sea is controlled by processes of mechanical differentiation of the material. The distribution of tungsten depends on the modes of its migration and on the hydrodynamics of the sea. Tungsten associated with coarse material is deposited primarily in the coastal zones; tungsten associated with finely dispersed suspensions and Fe, Mn, Al and Si gels migrates according to the principles of hydrodynamics and deposits in fine sediments of the pelagic zones of the sea. The paper was presented by Academician N. M. Strakhov, on 24 December 1965. Orig. art. has: 2 figures, 1 table.

SUB CODE: 08/ SUBM DATE: 20Dec65/ ORIG REF: 008/ OTH REF: 002

Card 2/2

ACC NR: AP7012429 SOURCE CODE: UR/0075/66/021/009/1050/1057

AUTHOR: Ostroumov, E. A.; Volkov, I. I.

ORG: Institute of Oceanology, AN SSSR (Institut okeanologii AN SSSR)

TITLE: Use of cinnamic acid in analytical chemistry. Report 8. Precipitation of rare earth elements and Yttrium and their separation from manganese, nickel, cobalt, zinc, calcium, and magnesium

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 9, 1966, 1050-1057

TOPIC TAGS: cinnamic acid, chemical precipitation, chemical separation, rare earth element, yttrium

SUB CODE: 07,11

ABSTRACT: To separate metals of the third analytical group, the authors used ammonium cinnamate, which quantitatively precipitates, upon heating, from weakly acidic solutions Fe, Al, Cr, Ti, Zr, Th, In, Ga, Be, U, and Sc, while Mn, Ni, Co, and Zn remain in solution and can thus be readily separated. The only slightly soluble compounds thus formed in most cases are crystalline basic cinnamate salts.

Solutions of the nitrates of rare earth elements and yttrium were prepared, beginning with the purest oxides verified by spectral analysis. The oxides were dissolved in concentrated HNO_3 with heating and the excess of the latter was

Card 1/2 UDC: 543.70

0932 1374

ACC NR: AP7012429

removed by evaporation over a water bath. The residue was dissolved in water and brought to the required volume. A solution of Ce(III) was prepared from chemically pure cerium nitrate. The titers of the solutions were established by evaporation in platinum dishes of precisely measured volume with subsequent calcining of the residue to the oxide. The concentration of the solutions was about 1 mg of oxide per ml.

It was found that rare earth elements and yttrium are quantitatively precipitated by ammonium cinnamate from weakly acidic solutions with pH ~ 3.5 upon heating. The final pH value of the solution ~5.4. The precipitates are crystalline and correspond in composition to the normal cinnamate salts $R(C_6H_5CH{:}CHCOO)_3$, where R = rare earth element. Upon calcining, these compounds are converted into oxides. The authors thank N. V. Lizunov, in whose laboratory were carried out the spectral analysis of oxides of the rare earth elements and the determination of calcium and magnesium in them. They also thank G. M. Varshal, in whose laboratory was carried out the chromographic analysis for the determination of the composition of the sum of rare earth elements. Orig. art. has: 7 tables. [JPRS: 40,422]

2/2

ACC NR: AP7008604

SOURCE CODE: UR/0075/67/022/001/0030/0033

AUTHOR: Ostroumov, E. A.; Volkov, I. I.

ORG: Oceanology Institute, AN SSSR, Moscow (Institut okeanologii AN SSSR)

TITLE: Use of cinnamic acid in analytical chemistry. Report No. 9. Cinnamates of rare earth elements and yttrium as a gravimetric form

SOURCE: Zhurnal analiticheskoy khimii, v. 22, no. 1, 1967, 30-33

TOPIC TAGS: rare earth compound, yttrium compound, cinnamic acid, gravimetric analysis

ABSTRACT: Conditions were determined under which rare earth elements and yttrium are precipitated by ammonium cinnamate on heating in the form of neutral salts of constant composition corresponding to the formula $R(C_6H_5CH:CHCOO)_3$, where R is the rare earth element or yttrium, no basic salts being formed. This is accomplished by adding the reagent quickly (ammonium cinnamate solution containing about 5% cinnamic acid) in substantial amounts with good stirring in order to have a sufficient initial concentration of reagent to counteract hydrolysis. The presence of ammonium salts in the solution does not affect the composition of the precipitate. The method permits the determination of very small amounts of rare earth elements and yttrium, since the cinnamate weighed has a fairly large molecular weight. The method can be used for analyzing special alloys where the rare earths are not in a mixture, but enter into

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UDC: 543.70

ACC NR: AP7008604

the composition of the alloy. It is particularly convenient for determining praseodymium and terbium, which on heating yield mixed oxides of frequently indeterminate composition. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 13May65/ ORIG REF: 002

SEVAST'YANOV, V.F.; VOLKOV, I.I.

Redistribution of iron and manganese in the oxidation-reduction processes in the bottom sediments of the oxidation zone in the Black Sea. Lit. i pol. iskop. no.4:72-84 Jl-Ag '65. (MIRA 18:9)

1. Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya stantsiya Instituta okeanologii AN SSSR, Gelendzhik.

VOLKOV, I. I.

VOLKOV, I. I.: "Some problems of linear matrical transformations". Moscow, 1955. Moscow State U imeni M. V. Lomonosov. (Dissertation for the Degree of Candidate of PHYSICOMATHEMATICAL SCIENCES)

SO: Knizhnaya Letopis' No 51, 10 December 1955

VOLKOV, I.I.

Some problems involved in linear matrix transformations. Dokl.AN SSSR 106 no.4:591-594 F '56. (MLRA 9:6)

1.Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova. Predstavleno akademikom P.S.Aleksandrovym.
(Matrices) (Series)

~~16(1)~~ 16.4000

68010

AUTHOR: Volkov, I.I. SOV/155-58-6-11/36

TITLE: On the Compatibility of two Summation Methods

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 6 pp 71-80 (USSR)

ABSTRACT: Definition : The (real) sequence $\{s_n\}$ is called summable by the (real) matrix $A = (a_{mn})$ to the value s, where s can be finite as well as infinite and of fixed sign, if

$$\lim_{m\to\infty} \sum_{n=1}^{\infty} a_{mn} s_n = s$$

Theorem 1 : Let A and B be regular methods described by the non-negative matrices $A = (a_{mn})$ and $B = (b_{mn})$ with finite lines. If each A-summable sequence is B-summable, then the methods A and B are compatible for all sequences. Theorem 2 considers the summability to $+\infty$.

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68010 11

On the Compatibility of two Summation Methods SOV/155-58-6-11/36

There are 5 references, 1 of which is Soviet, 1 French, 1 Polish, and 2 English.

ASSOCIATION: Moskovskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva (Moscow Institute for Mechanization and Electrification of Agriculture)

SUBMITTED: June 10, 1957 (Uspekhi matematicheskikh nauk)
October 24, 1958 (Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki)

Card 2/2

VOLKOV, I.I.

VOLKOV, I.I. (Moskva)

Linear matrix transformations. Mat. sbor. 44 no.1:85-112 Ja '58.
(MIRA 11:2)

(Matrices)

VOLKOV, I.I., dotsent, kand.fiziko-matematicheskikh nauk

Applying the method (C,α) to the summation of divergent series. Trudy MIMESKH 4 no.1:137-146 '59. (MIRA 13:10)

(Series, Divergent)

VOLKOV, I.I.

Summability factors for Cesaro's methods of complex order. Usp.mat.nauk 17 no.1:161-168 Ja-F '62. (MIRA 15:3)

(Series, Divergent)

OSTROUMOV, E.A.; VOLKOV, I.I.

Sulfates in the bottom sediments of the Black Sea. Trudy Inst. okean. 67:92-100 '64. (MIRA 17:12)

Separation of indium and gallium from manganese, nickel, cobalt and zinc with the help of cinnamic acid. Ibid.:141-150

A new method of gravimetric determination of beryllium and its separation from manganese, nickel, cobalt and zinc with the help of cinnamic acid. Ibid.:151-156

VOLKOV, I.I.

Formation regularities and chemical composition of iron sulfide nodules in the deposits of the Black Sea. Trudy Inst. okean. 67:101-134 '64.
(MIRA 17:12)

VOLKOV, I.I.; OSTROUMOV, E.A.

Cinnamic acid in analytical chemistry. Report No.7: Separation of titanium from iron, aluminum, chromium, and other elements. Zhur.anal. khim. 19 no.10:1223-1227 '64. (MIRA 17:12)

1. Institute of Oceanology, U.S.S.R. Academy of Sciences, Moscow.

VOLKOV, I. I.

231T39

USSR/Engineering - Combustion, Coals May 52

"Combustion of Anthracite Dust and Its Mixture With Lean Coal," A. N. Lebedev, Cand Tech Sci, I. I. Volkov, Jr Sci Worker, and M. A. Yefremov, Engr, Combustion Lab, TETs, Mosenergo (Steam-Elec Power Sta, Moscow Regional Elec Power Admin)

"Iz v-s Teplotekh Inst" No 5, pp 17-20

Describes expts for combustion of Donets anthracite dust in pure state and mixed with lean coal, in shielded furnace with corner burners and without any ignition belt, by 2-stage method developed at VTI. Exptl data obtained permit establishing optimum distribution of air required in each stage of combustion process. Boiler furnace of TETs under operating conditions was used for expts.

231T39

231T39

LEBEDEVE, A.N.: VOLKOV, I.I.: YEFREMOV, M.A.

Coal, Pulverized

Buring pulverized coal and its mixtures with thin coal. Izv. VTI 21 No. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED

ROMADIN, V.F., Dr.; VOLKOV, I.I., Eng.

Combustion

Heat economy of schemes with interrupted cycle. Izv. VTI 21 No. 8, 1952

9. **Monthly List of Russian Accessions**, Library of Congress, December 1952 ~~1953~~ Unclassified.

1. VOLKOV, I. I., Eng.

2. USSR (600)

4. Coal, Pulverized

7. Determining the grain structure of coal dust produced in vertical shaft mills.
Izv. VTI 21 no. 10, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

VOLKOV, I. I.

L 14692-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD/GW

ACC NR: AP6004395 (N) SOURCE CODE: UR/0020/66/166/003/0701/0704

35
B

AUTHOR: Sevast'yanov, V. F.; Volkov, I. I.

ORG: Black Sea Experimental Scientific Research Station, Institute of Oceanology, Academy of Sciences, SSSR (Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya stantsiya Instituta okeanologii Akademii nauk SSSR)

TITLE: Chemical composition of iron-manganese concretions from the Black sea 12,55

21 21

SOURCE: AN SSSR. Doklady, v. 166, no. 3, 1966, 701-704

TOPIC TAGS: iron oxide, manganese compound, ~~sea water~~, geochemistry, analytic chemistry, metal compound

12,44,55

ABSTRACT: The chemical composition of concretions taken from the sea bottom at 15 stations on the Black Sea coast near the Crimea was analyzed. The bulk of the concretions consists of iron and manganese oxides in variable concentrations. The Fe/ /Mn ratio changes from 1.45 to 28.6. A definite inverse portion is observed between the content of iron and that of manganese. Iron is present only in the trivalent state, and its content ranges from 26.08 to 52.27% (in terms of Fe_2O_3); manganese is present in the divalent state, and its content ranges from 1.83 to 18.02% (in terms

UDC: 550.41

Card 1/2

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L 14692-66

ACC NR: AP6004395

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of MnO). The active oxygen concentration varies from 0.17 to 3.35%. Substantial amounts of SiO_2, Al_2O_3, and $CaCO_3$ were found. The elements present are divided into three groups: (1) Ni, Co, Cu, Mo, and P, which are characterized by a high geochemical mobility; (2) Ti, Zr, and Cr, which have a low geochemical mobility; (3) V and W, intermediate between the first two groups in mobility. It is concluded that the iron-manganese concretions in present-day bottom sediments are diagenetic formations resulting from the drawing together of authigenic oxidized forms of manganese and iron and of elements combined with these components of the sea bottom. The paper was presented by Academician N. M. Strakhov on 13 October 1965. Orig. art. has: 1 figure, 1 table.

SUB CODE: 08,07/ SUBM DATE: 10Oct65/ ORIG REF: 004/ OTH REF: 000

BVK

Card 2/2

VOLKOV, I.I.

Linear transformations of directionally diverging sequences. Dokl. AN SSSR 165 no.4:742-744 D '65. (MIRA 18:12)

1. Moskovskiy institut inzhenerov sel'skokhozyaystvennogo proizvodstva. Submitted April 15, 1965.

OSTROUMOV, E.A.; VOLKOV, I.I.

Precipitation of uranium and its separation from manganese, nickel, cobalt, and zinc by means of cinnamic acid. Trudy Inst. okean. 79:69-74 '65.

Precipitation of scandium and its separation from manganese, nickel, cobalt, and zinc by means of cinnamic acid. Ibid.:75-80

Separation of titanium from iron, aluminum, chromium, and other elements by means of cinnamic acid. Ibid.:81-86
(MIRA 18:8)

OSTROUMOV, E.A.; VOLKOV, I.I.

Use of cinnamic acid in analytical chemistry. Report No.6: Precipitation of scandium and its separation from manganese, nickel, cobalt, and zinc. Zhur.anal.khim. 19 no.9:1073-1077 '64. (MIRA 17:10)

1. Institut okeanologii AN SSSR, Moskva.

OSTROUMOV, E.A.; VOLKOV, I.I.

Use of cinnamic acid in analytical chemistry. Report No.5: Precipitation of uranium and its separation from manganese, nickel, cobalt, and zinc. Zhur. anal. khim. 19 no.2:216-220 '64. (MIRA 17:9)

1. Institut okeanologii AN SSSR, Moskva.

VOLKOV, I.I.

High quality cellulose for viscose fiber. Bum.prom. 36 no.3:11-12 Mr '61. (MIRA 14:4)

1. Direktor Klinskogo kombinata.
(Cellulose) (Rayon)

CHERNETSKIY, N.S., kand. tekhn. nauk; PETROSYAN, R.A.;
LEYZEROVICH, A.Sh., inzh.; VOLKOV, I.I.

Determination of technical and economic indices of the operation of a 200 Kw. block using a control computer. Teploenergetika 11 no.7:20-24 Jl '64. (MIRA 17:8)

1. Vsesoyuznyy teplotekhnicheskiy institut.

VOLKOV, I.M.

Downstream formation of an abrupt wave during discharge into an empty channel. Izv.AN Kazakh.SSR.Ser.energ.no.11:34-61 '56. (MLRA 10:2)
(Fluid dynamics)

VOLKOV, I.M.

An agricultural exhibition at school. Est. v shkole no.3:83-84 My-Je '54. (MLRA 7:7)

1. Direktor chernomuzhskoy semiletney shkoly Sharangskogo rayona Kirovskoy oblasti. (Agricultural exhibitions)

VOLKOV, I.M.

Calculating the motion of the outflow wave in a dry flume. Trudy Inst.energ.AN Kazakh.SSR 3:74-108 '61. (MIRA 14:12)
(Fluid dynamics)

NOVIKOV, I.T.; NEPOROZHNIY, P.S.; GANICHEV, I.A.; LAVRENENKO, K.D.;
FINOGENOV, Ya.I.; ALEKSANDROV, D.Ya.; SERDYUKOV, N.P.;
KUDRYAVTSEV, L.N.; PETROV, A.N.; BANNIK, V.P.; VOLKOV, I.M.;
MEL'NIKOV, B.V.; STAROSTIN, I.A.; BUBNOVSKIY, G.A.; SUVORIN,
F.Ya.; GRITSAY, B.I.; SKUPKOV, A.A.; BAMSHTEYN, Ye.B.; TURCHIN,
N.Ya.

IUrii Nikolaevich Pongil'skii; obituary. Energ. stroi.
no.27:99 '62. (MIRA 15:9)
(Pongil'skii, IUrii Nikolaevich, 1925-1962)

8(6), 14(10) SOV/112-59-4-6669

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 41 (USSR)

AUTHOR: Volkov, I. M.

TITLE: Reviewing the Results of Investigations of Release-Wave Travel Over a Dry Channel

PERIODICAL: Tr. In-ta energ. AS Kazakhskaya SSR, 1958, Vol 1, pp 3-18

ABSTRACT: The history of studying transient-wave traveling in an open channel is described, and theoretical investigations of wave travel over a dry channel made by Engineer N. M. Bernadskiy are reported; laboratory investigations conducted by several institutes are reported. Formulae are presented. Bibliography: 63 items.

Card 1/1

VOLKOV, I. M. —

"Formation and Motion of a Wave Front in a Dry River Bed." Dr Tech Sci, Leningrad Inst of Water Transport Engineers, Leningrad, 1954. (RZhMekh, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum. No. 481, 5 May 55

SOV/124-58-8-8756

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 60 (USSR)

AUTHOR: Volkov, I.M.

TITLE: Formation of a Translatory Bore Wave in a Tail Water Upon a Release of Water into a Dry River Bed (Obrazovaniye volny popuska v nizhnem b'yefe pri izlive v sukhoye ruslo)

PERIODICAL: (KazSSR Gylym Akad. khabarlary) Izv. AN KazSSR, Ser. energ., 1956, Nr 11, pp 34-61

ABSTRACT: Its subject being the translatory bore wave heading a flow of water released into an initially dry tail-water basin, this paper deals with the formation of said wave as of the instant that the water crosses the barrage and starts to enter the basin. The author has conducted detailed experiments on the formation of this type of translatory wave, using for the purpose a rectangular trough fitted with a removable block-off partition; tests were made with and without lateral contraction. In the performance of his experiments he employs motion-picture photography, grid coordinates, and graduated measuring rods. From an analysis of his motion-picture frames he determines the depths at the abscissa of the block-off partition,

SOV/124-58-8-8756

Formation of a Translatory Bore Wave in a Tail Water (cont.)

the mass flow at that location, and the propagation rates and contours of the aforementioned translatory bore wave. By using in some of the experiments small spheres suspended in the water he is able to determine the velocities at various points of the wave as well. Included in the article are extensive data on the measurements the author made during the experiments, also formulae and graphs embodying the results of his analysis of the proposals that he makes for determining the water-discharge rate involved and the depth at the nominal location of the barrage. Bibliography: 10 references.

V.A. Arkhangel'skiy

Card 2/2

S/115/62/000/007/003/008
E194/E455

AUTHOR: Volkov, I.N.

TITLE: The measurement of stresses and small displacements by means of frequency pick-ups

PERIODICAL: Izmeritel'naya tekhnika, no.7, 1962, 14-16

TEXT: The usual resistance strain gauges have the disadvantage that they can only be used once. A device is described for the repeated static and dynamic measurement of stresses and small strains; it is used in an oil-field to transmit, by radio, teledynamograms of well-bottom pumps. The device consists of a displacement pick-up and a frequency meter whose output is read directly or by oscillograph. The pick-up is a LC-generator based on a germanium transistor; its circuit inductance varies in proportion to the strain at its base, so altering the generated frequency. The meter, which measures this alteration, has a phase-shift train whose input and output voltages are applied to a phase discriminator which converts the phase displacement to a d.c. voltage for reading directly as strain. Construction of the various parts is described and the circuit diagram is given. The

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The measurement of stresses ...

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range of frequency change is ± 5%; a change in pick-up ambient temperature of ± 15°C alters the output reading by 1%. The sensitivity of the pick-up is 10 c/s per micron, so that displacements of 0.1 to 0.05 microns upwards can be measured. Its sensitivity can be widely altered by adjusting the gap in the magnetic circuit of the inductance or by altering the capacitance in the resonance circuit. There are 3 figures.

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VOLKOV, I.N.

Using frequency pickups in measuring stresses and minor displacements. Izm.tekh. no.7:14-16 Jl '62. (MIRA 15:6)
(Strain gauges)

VOLKOV, I.N.

Radiotelemetric dynamograph with frequency transducers. Izv. vys. ucheb. zav.; neft' i gaz 4 no.9:73-78 '61. (MIRA 14:12)

1. Taganrogskiy radiotekhnicheskiy institut.

(Remote control)
(Oil well pumps)

ACCESSION NR: AP4039390 S/0144/64/000/005/0616/0620

AUTHOR: Volkov, Imert Nikolayevich (Aspirant)

TITLE: Investigation of a frequency-sensitive pickup

SOURCE: IVUZ. Elektromekhanika, no. 5, 1964, 616-620

TOPIC TAGS: electromeasuring device, electromechanical converter, magnet coil, transducer, thermistor, testing device

ABSTRACT: The article reports the results of an analysis of a pickup used by the Department of Automation and Telemechanics of Taganrogskiy radiotekhnicheskiy institut to plot (via a radio channel) dynamic performance curves of deep pump installations. The purpose of the analysis was to determine the variation of the frequency of the electric oscillations with the inductance of the pickup resonant circuit (or with the plunger displacement) and the eliminate the nonlinearities in this variation, to find a method for temperature compensation of the frequency and amplitude drift, and to determine the

ACCESSION NR: AP4039390

feedback coefficient necessary for proper operation. The pickup is regarded as a controlled electric oscillator and the conditions for its stationary operation are derived. The amplitude balance conditions yield the required feedback coefficient, while the phase balance yields the operating frequency. The nonlinearity in inductance vs. frequency curve is compensated by a nonlinearity in the inductance vs. displacement curve, making the overall pickup characteristic linear. Temperature compensation is by means of a thermistor connected in parallel with the resistance in the connection circuit. The same thermistor compensates for both the frequency and amplitude drift. Orig. art. has: 7 figures and 4 formulas.

ASSOCIATION: None

SUBMITTED: 05Apr62	DATE ACQ: 19Jun64	ENCL: 00
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VOLKOV, Imert Nikolayevich, aspirant

Study of a frequency transducer. Izv. vys. ucheb. zav.; elektromekh. 7 no.5:616-620 '64. (MIRA 17:9)

1. Kafedra avtomatiki i telemekhaniki Taganrogskogo radiotekhnicheskogo instituta.

VOLKOV, I.P.

Reducing yarn breakage in weaving. Tekst.prom. 21 no.7:43-44 Jl '61. (MIRA 14:8)

1. Glavnyy inzhener pryadil'no-tkatskoy fabriki imeni Vagzhanova.
(Weaving) (Textile machinery)

L 12169-66 EWT(m)/T/EWP(t)/EWP(k)/EWP(b)/EWA(h)/EWA(c) JD/HW/DJ

ACC NR: AP6000174 UR/0148/65/000/009/0098/0102

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AUTHOR: Zaleskiy, V. I.; Volkov, I. P.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Study of the deformation of metal during upsetting under conditions of vibration loading 14 14

SOURCE: IVUZ. Chernaya metallurgiya, no. 9, 1965, 98-102

TOPIC TAGS: vibration stress, cyclic load, metal, plastic deformation, cold forging

ABSTRACT: This investigation was based on the use of a hydraulic vibrator with generation of hydraulic pulsations by means of a screw pump, mounted in a vertical hydraulic press 14 with a 200-ton squeeze (Fig. 1). The vibrator's cylinder is mounted on the press bolster. Attached to the mobile press cross-bar is a platen with a dynamometer for measuring the deformation stress. For hot upsetting a heated upset punch is attached below the dynamometer. A water-cooled fitting to protect the dynamometer from overheating is installed between the punch and the dynamometer. Mounted on the vibrator piston is the upset die. In the tests, cylindrical specimens of lead with various diameter-to-height ratios (D_0/H_0 = 0.65, 1.54, 3) were cold-upset, at various vibration frequencies. The vibration-loading stress as a function of degree of deformation during upsetting is presented in Fig. 2. Similar experiments were

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